



HVX9000 Adjustable Frequency Drives

Technical Data

IntelliPass Drive with Bypass
IntelliDisconnect Drive
with Disconnect

Prices effective May 2005
Supersedes June 2004



NEMA Type 1



NEMA Type 12



NEMA Type 3R

Product Description

The Cutler-Hammer® IntelliDisconnect Drive from Eaton's electrical business combines a premier quality drive with a circuit breaker disconnect integrated into the design. Eaton's IntelliPass Drive continues the Cutler-Hammer tradition of providing a premier intelligent drive integrated with a reliable bypass configuration, by taking advantage of the Cutler-Hammer Intelligent Technologies (IT), enclosed control and circuit breaker expertise.

The IntelliPass bypass is a two- or three-contactor design utilizing the 24V DC IT series of contactors and power supplies. The IT features, function and form allow the drive and bypass to become an integrated design, enabling Eaton to manufacture the world's smallest drive and bypass package. The IntelliPass comes standard with a Cutler-Hammer circuit breaker integrated into the drive and bypass design.

Features and Benefits

IntelliPass/IntelliDisconnect

- Circuit breaker provides flexible drive isolation configurations to meet customers' needs

- Reliable drive with over 500,000 hours MTBF
- Weighs up to 70% less than other designs which simplifies and speeds up the installation process, lowering contractors' costs
- Serial communication interface enables control of the motor operated by the drive or bypass
- Plenum rated
- Designed and tested to UL 508C specifications
- Standard 3% line reactors for enhanced transient and harmonic distortion protection
- EMI/RFI Filters standard on all drives
- Top and bottom conduit entry for installation ease
- Standard drive current with standard rating of 100 kAIC
- Upgradeable software extends product life
- Pass-through I/O capability
- Additional I/O and communication cards provide plug and play functionality
- Copy/Paste keypad function allows transfer of parameter settings from one drive to the next
- Keypad can display up to three monitored parameters simultaneously

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- Hand-held Power Supply option allows programming/monitoring of control module without applying power to the drive
- NEMA Type 1, 12 or 3R
- Standard NEMA Type 12 keypad on all drives
- Simplified operating menu allows for typical programming changes
- Accommodates a wide selection of expander boards and adapter boards
- Control logic can be powered from an external auxiliary control panel
- Standard I/O boards include 6 DI, 2AI, 1 DO, 1 AO, 2 form C RO and a bypass control board installed in slots A, B and C

IntelliPass

- Fully rated, mechanically and electrically interlocked contacts
- Solid-state motor overload relay provides motor protection while in bypass
- HAND/OFF/AUTO and DRIVE/BYPASS selector on keypad simplifies control
- Two power sources for control ensure redundancy and provide additional ride-through capability
- Self-healing power supplies
- Bypass current interrupting rate up to 65 kAIC

Technical Data and Specifications

Table 1. HVX9000 Specifications

Description	Specification
Power Connections	
Input Voltage (V_{in})	+10% / -15%
Input Frequency (f_{in})	50/60 Hz (variation up to 45 – 66 Hz)
Connection to Power	Once per minute or less (typical operation)
Short Circuit Withstand Rating	65 k AIC ^①

Motor Connections	
Output Voltage	0 to V_{in}
Continuous Output Current	Ambient temperature max. +104°F(+40°C), overload 1.1 x I_L (1 min./10 min.)
Starting Current	110%
Output Frequency	0 to 320 Hz
Frequency Resolution	.01 Hz

Control Characteristics	
Control Method	Frequency Control (V/f) Open Loop Sensorless Vector Control
Switching Frequency	Adjustable Parameter 1 – 40 hp: 1 to 16 kHz; default 10 kHz 50 – 75 hp: 1 to 10 kHz; default 3.6 kHz
Frequency Reference	Analog Input: Resolution .1% (10-bit), accuracy ± 1% Panel Reference: Resolution .01 Hz
Field Weakening Point	30 to 320 Hz
Acceleration Time	0 to 3000 sec.
Deceleration Time	0 to 3000 sec.
Braking Torque	DC brake: 30% x T_n (without brake option)

Ambient Conditions	
Ambient Operating Temperature	14°F (-10°C), no frost to 104°F (+40°C)
Storage Temperature	-40°F (-40°C) to 158°F (70°C)
Relative Humidity	0 to 95% RH, noncondensing, non-corrosive, no dripping water
Air Quality	Chemical vapors: IEC 721-3-3, unit in operation, class 3C2; Mechanical particles: IEC 721-3-3, unit in operation, class 3S2
Altitude	100% load capacity (no derating) up to 3280 ft. (1000m); 1% derating for each 328 ft. (100m) above 3280 ft. (1000m); max. 9842 ft. (3000m)
Enclosure Class	NEMA 1/IP21

Standards	
EMC (at default settings)	Immunity: Fulfills all EMC immunity requirements; Emissions: EN 61800-3, LEVEL H
Safety	UL 508C
Product	IEC 61800-2

^① 65kAIC on Type 1 units operating at a line input voltage of 480V or less.

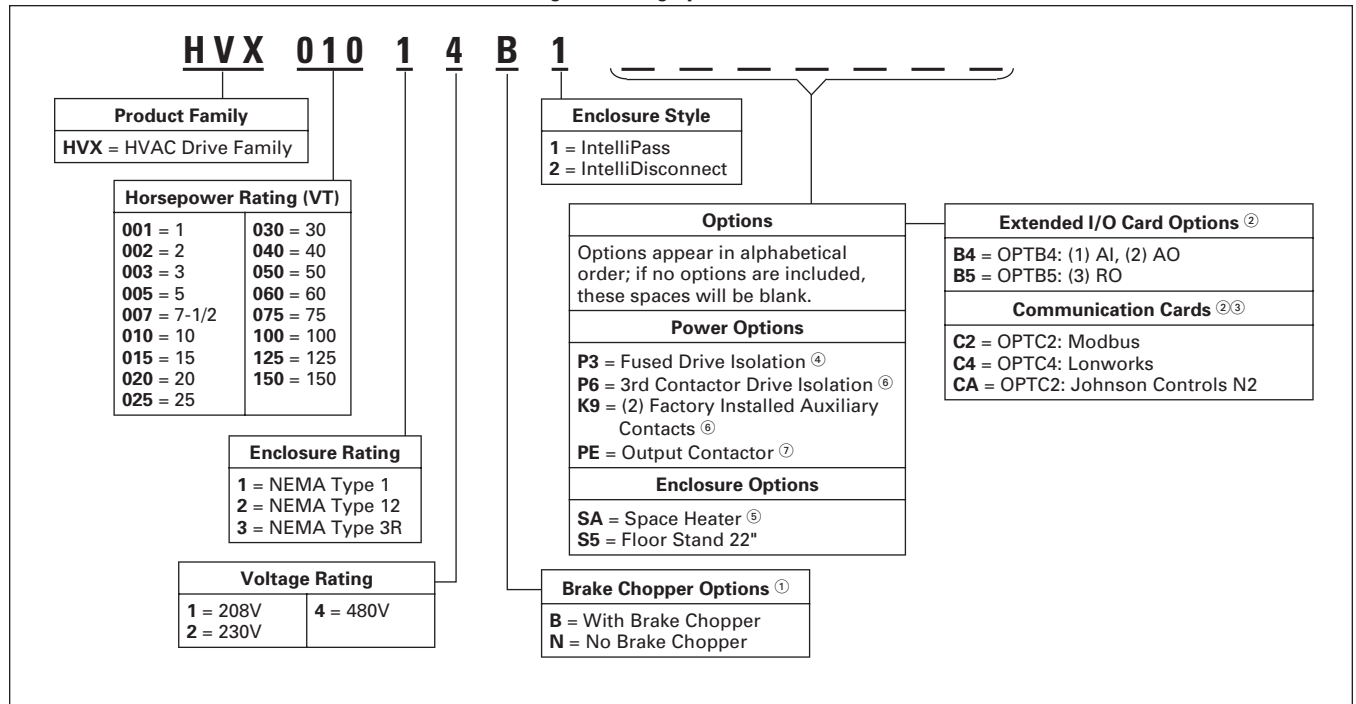
Description	Specification
Control Connections	
Analog Input Voltage	0 to 10V, R = 200Ω differential (-10 to 10V joystick control) Resolution .1%; accuracy ±1%
Analog Input Current	0(4) to 20 mA; R_i - 250Ω differential
Digital Inputs (6)	Positive or negative logic; 18 to 24V DC
Auxiliary Voltage	+24V ±15%, max. 250 mA
Output Reference Voltage	+10V +3%, max. load 10 mA
Analog Output	0(4) to 20 mA; R_L max. 500Ω; Resolution 10 bit; Accuracy ±2%
Digital Outputs	Open collector output, 50 mA/48V
Relay Outputs	2 programmable Form C relay outputs Switching capacity: 24V DC / 8A, 250V AC / 8A, 125V DC / .4A

Protections	
Overcurrent Protection	Trip limit 4.0 x I_{CT} instantaneously
Overvoltage Protection	Yes
Undervoltage Protection	Yes
Earth Fault Protection	In case of earth fault in motor or motor cable, only the frequency converter is protected
Input Phase Supervision	Trips if any of the input phases are missing
Motor Phase Supervision	Trips if any of the output phases are missing
Overtemperature Protection	Yes
Motor Overload Protection	Yes
Motor Stall Protection	Yes
Motor Underload Protection	Yes
Short Circuit Protection	Yes (Of the +24V and +10V Reference Voltages)

General	
Line Voltage	208/230/480V
Drive Efficiency	>95%
Power Factor (Displacement)	.96
Ratings	UL Listed, File No. E134360
Warranty	Standard Terms

Catalog Number Selection

Table 2. HVX9000 IntelliPass/IntelliDisconnect Drive Catalog Numbering System



- ① 480V Drives, 50 – 150 hp are only available with Brake Chopper Option **N**.
480V Drives, 1 – 40 hp are only available with Brake Chopper Option **B**.
208/230V Drives, 1 – 20 hp are only available with Brake Chopper Option **B**.
208/230V Drives, 25 – 75 hp are only available with Brake Chopper Option **N**.
- ② Two slots (D, E) available for expansion cards.
- ③ Only one communication card can be installed at a time.
- ④ Fused Drive Isolation (**P3**) option only applicable in NEMA Type 12 and 3R enclosures.
- ⑤ Space Heater (**SA**) option only applicable in NEMA Type 12/3R enclosures.
- ⑥ IntelliPass Only.
- ⑦ IntelliDisconnect Only.

Product Selection

Table 3. HVX9000 IntelliPass Base Units

Frame Size	Delivery Code	Voltage	hp (VT)	Current (NEC)	NEMA Type 1	NEMA Type 12	NEMA Type 3R		
					Catalog Number	Catalog Number	Catalog Number		
FR4	FB10	208V AC	1	4.6	HVX00111B1	HVX00121B1	HVX00131B1		
			2	7.5	HVX00211B1	HVX00221B1	HVX00231B1		
			3	10.6	HVX00311B1	HVX00321B1	HVX00331B1		
		230V AC	1	4.2	HVX00112B1	HVX00122B1	HVX00132B1		
			2	6.8	HVX00212B1	HVX00222B1	HVX00232B1		
			3	9.6	HVX00312B1	HVX00322B1	HVX00332B1		
		480V AC	1	3	HVX00114B1	HVX00124B1	HVX00134B1		
			2	3.4	HVX00214B1	HVX00224B1	HVX00234B1		
			3	4.8	HVX00314B1	HVX00324B1	HVX00334B1		
5 7-1/2	7.6 11		HVX00514B1 HVX00714B1	HVX00524B1 HVX00724B1	HVX00534B1 HVX00734B1				
FR5	FB10	208V AC	5	16.7	HVX00511B1	HVX00521B1	HVX00531B1		
			7-1/2	24.2	HVX00711B1	HVX00721B1	HVX00731B1		
		230V AC	5	15.2	HVX00512B1	HVX00522B1	HVX00532B1		
			7-1/2 10	22 28	HVX00712B1 HVX01012B1	HVX00722B1 HVX01022B1	HVX00732B1 HVX01032B1		
		480V AC	10	14	HVX01014B1	HVX01024B1	HVX01034B1		
			15	21	HVX01514B1	HVX01524B1	HVX01534B1		
			20	27	HVX02014B1	HVX02024B1	HVX02034B1		
		FR6	FB10	208V AC	10	30.8	HVX01011B1	HVX01021B1	HVX01031B1
					15	46.2	HVX01511B1	HVX01521B1	HVX01531B1
20	59.4				HVX02011B1	HVX02021B1	HVX02031B1		
230V AC	15			42	HVX01512B1	HVX01522B1	HVX01532B1		
	20			54	HVX02012B1	HVX02022B1	HVX02032B1		
480V AC	25			34	HVX02514B1	HVX02524B1	HVX02534B1		
	30			40	HVX03014B1	HVX03024B1	HVX03034B1		
	40			52	HVX04014B1	HVX04024B1	HVX04034B1		
FR7	FB10			208V AC	25	74.8	HVX02511N1	HVX02521N1	HVX02531N1
		30	88		HVX03011N1	HVX03021N1	HVX03031N1		
		230V AC	25	68	HVX02512N1	HVX02522N1	HVX02532N1		
			30	80	HVX03012N1	HVX03022N1	HVX03032N1		
		480V AC	50	65	HVX05014N1	HVX05024N1	HVX05034N1		
			60	77	HVX06014N1	HVX06024N1	HVX06034N1		
			75	96	HVX07514N1	HVX07524N1	HVX07534N1		
		FR8	FB10	208V AC	40	114	—	HVX04021N1 ^①	HVX04031N1 ^①
					50	140	—	HVX05021N1	HVX05031N1
60	170				—	HVX06021N1	HVX06031N1		
230V AC	40			104	—	HVX04022N1 ^①	HVX04032N1 ^①		
	50			130	—	HVX05022N1	HVX05032N1		
	60			154	—	HVX06022N1	HVX06032N1		
480V AC	75			192	—	HVX07522N1	HVX07532N1		
	100			124	—	HVX10024N1	HVX10034N1		
	125			156	—	HVX12524N1	HVX12534N1		
150	180	—	HVX15024N1	HVX15034N1					

① 40 hp 208V and 230V supplied as a FR7 drive, but in a FR8 enclosure size.

Table 4. HVX9000 IntelliDisconnect Base Units

Frame Size	Delivery Code	Voltage	hp (VT)	Current	NEMA Type 1	NEMA Type 12	NEMA Type 3R		
					Catalog Number	Catalog Number	Catalog Number		
FR4	FB10	208V AC	1	4.8	HVX00111B2	HVX00121B2	HVX00131B2		
			2	7.8	HVX00211B2	HVX00221B2	HVX00231B2		
			3	11	HVX00311B2	HVX00321B2	HVX00331B2		
		230V AC	1	4.8	HVX00112B2	HVX00122B2	HVX00132B2		
			2	7.8	HVX00212B2	HVX00222B2	HVX00232B2		
			3	11	HVX00312B2	HVX00322B2	HVX00332B2		
		480V AC	1	3.3	HVX00114B2	HVX00124B2	HVX00134B2		
			2	4.3	HVX00214B2	HVX00224B2	HVX00234B2		
			3	5.6	HVX00314B2	HVX00324B2	HVX00334B2		
		5	7.6	HVX00514B2	HVX00524B2	HVX00534B2			
		7-1/2	12	HVX00714B2	HVX00724B2	HVX00734B2			
FR5	FB10	208V AC	5	17.5	HVX00511B2	HVX00521B2	HVX00531B2		
			7-1/2	25	HVX00711B2	HVX00721B2	HVX00731B2		
		230V AC	5	17.5	HVX00512B2	HVX00522B2	HVX00532B2		
			7-1/2	25	HVX00712B2	HVX00722B2	HVX00732B2		
			10	31	HVX01012B2	HVX01022B2	HVX01032B2		
		480V AC	10	16	HVX01014B2	HVX01024B2	HVX01034B2		
			15	23	HVX01514B2	HVX01524B2	HVX01534B2		
			20	31	HVX02014B2	HVX02024B2	HVX02034B2		
		FR6	FB10	208V AC	10	31	HVX01011B2	HVX01021B2	HVX01031B2
15	48				HVX01511B2	HVX01521B2	HVX01531B2		
20	61				HVX02011B2	HVX02021B2	HVX02031B2		
230V AC	15			48	HVX01512B2	HVX01522B2	HVX01532B2		
	20			61	HVX02012B2	HVX02022B2	HVX02032B2		
480V AC	25			38	HVX02514B2	HVX02524B2	HVX02534B2		
	30			46	HVX03014B2	HVX03024B2	HVX03034B2		
	40			61	HVX04014B2	HVX04024B2	HVX04034B2		
FR7	FB10			208V AC	25	75	HVX02511N2	HVX02521N2	HVX02531N2
		30	88		HVX03011N2	HVX03021N2	HVX03031N2		
		230V AC	25	75	HVX02512N2	HVX02522N2	HVX02532N2		
			30	88	HVX03012N2	HVX03022N2	HVX03032N2		
		480V AC	50	72	HVX05014N2	HVX05024N2	HVX05034N2		
			60	87	HVX06014N2	HVX06024N2	HVX06034N2		
			75	105	HVX07514N2	HVX07524N2	HVX07534N2		
		FR8	FB10	208V AC	40	114	—	HVX04021N2 ①	HVX04031N2 ①
					50	143	—	HVX05021N2	HVX05031N2
60	169				—	HVX06021N2	HVX06031N2		
230V AC	40			104	—	HVX04022N2 ①	HVX04032N2 ①		
	50			130	—	HVX05022N2	HVX05032N2		
	60			154	—	HVX06022N2	HVX06032N2		
	75			192	—	HVX07522N2	HVX07532N2		
480V AC	100			124	—	HVX10024N2	HVX10034N2		
	125			156	—	HVX12524N2	HVX12534N2		
	150			180	—	HVX15024N2	HVX15034N2		

① 40 hp 208V and 230V supplied as a FR7 drive, but in a FR8 enclosure size.

Table 5. Options

Voltage	hp (VT)	Description	Suffix Number
208/230V AC	1 – 7-1/2	Drive Isolation Fusing	P3 ②
	10 15 20		
480V AC	1 – 15	Drive Isolation Fusing	P3 ②
	20		
	25		
	30		
	40		
208/230V AC	1 – 3	3rd Contactor Drive Isolation	P6 ③
	5 – 7-1/2		
	10		
	15		
	20		
	25		
	30		
	40		
	50		
	60		
75 ④			
480V AC	1 – 7-1/2	3rd Contactor Drive Isolation	P6 ③
	10 – 15		
	20		
	25		
	30		
	40		
	50		
	60		
	75		
	100		
125			
150			
208/230V AC	1 – 3	Output Contactor	PE ⑤
	5 – 7-1/2		
	10		
	15		
	20		
	25		
	30		
	40		
	50		
	60		
75 ④			
480V AC	1 – 7-1/2	Output Contactor	PE ⑤
	10 – 15		
	20		
	25		
	30		
	40		
	50		
	60		
	75		
	100		
125			
150			
208/230V AC	1 – 30	Auxiliary Contacts, (2) Factory Installed	K9 ⑥
480V AC	1 – 75	Auxiliary Contact, (1) Not Installed	①
		Auxiliary Contacts, (2) Factory Installed	K9 ⑥

① Catalog Number **EMA13**.

② **P3** option can only be used in NEMA Type 12 and NEMA Type 3R enclosures.

③ **P6** option only available with IntelliPass Drives.

④ 75 hp only available on 230V units.

⑤ **PE** option only available with IntelliDisconnect Drives.

⑥ **K9** option only available with IntelliPass Drives.

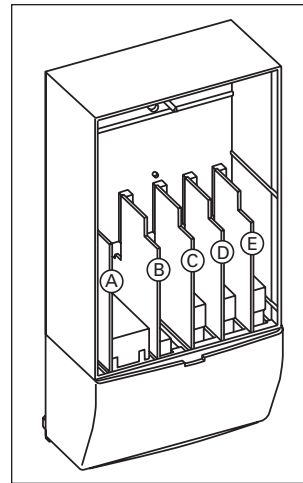
Table 6. Enclosure Option

Description	Factory Installed
	Suffix Number
Space Heater ⑦	SA
Floor Stand 22" ⑧	S5

⑦ Space Heater (**SA**) only applicable in NEMA Type 12/3R enclosures.

⑧ **S5** option only available in enclosure size C.

HVX9000 IntelliPass Option Boards



The HVX9000 IntelliPass Series drives can accommodate a wide selection of expander and adapter option boards to customize the drive for your application needs. The drive's control unit is designed to accept a total of five option boards. See **Figure 1**.

The HVX9000 IntelliPass factory installed standard option board configuration includes an A9/I/O board, A2 relay output board and a B5 output board which are installed in slots A, B and C respectively. Two slots (D, E) for extended I/O and communication cards.

Figure 1. HVX9000 IntelliPass Option Boards

Table 7. Option Board Kits

Option Kit Description ⑨	Allowed Slot Locations ⑩	Catalog Number	Factory Installed Suffix Number
Basic I/O Cards			
2 RO	B	OPTA2	Standard
6 DI, 1 DO 2 AI, 1 AO	A	OPTA9	Standard
small terminal block			
3 RO	C	OPTB5	Standard
Extended I/O Cards			
1 AI, 2 AO	C, D	OPTB4	B4
3 RO	C, D	OPTB5	B5
Communication Cards ⑪			
Modbus	D, E	OPTC2	C2
Lonworks	D, E	OPTC4	C4
Johnson Controls N2	D, E	OPTC2	CA

⑨ AI = Analog Input; AO = Analog Output; DI = Digital Input; DO = Digital Output; RO = Relay Output.

⑩ Option card must be installed in one of the slots listed for that card. Slot indicated in bold is the preferred location.

⑪ Only one communication card can be installed.

Accessories

Table 8. HVX9000 Drive Accessories

Description	Catalog Number
9000X Drive Demo	9000XDEMO
Hand Held 24V Auxiliary Power Supply — used to supply power to the control module in order to perform keypad programming before the drive is connected to line voltage	9000XAUX24V

Dimensions

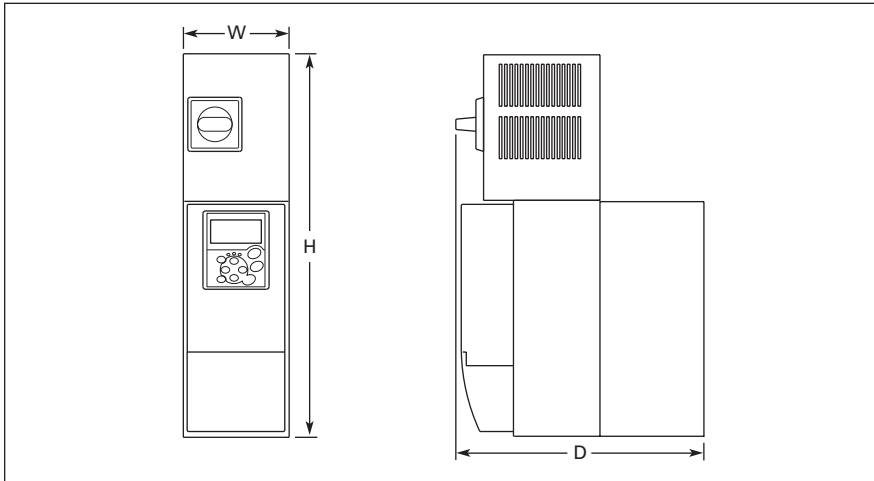


Figure 2. NEMA Type 1 IntelliPass/IntelliDisconnect Drive Dimensions

Table 9. NEMA Type 1 IntelliPass/IntelliDisconnect Drive Dimensions

Frame Size	Voltage AC	hp (VT)	Approximate Dimensions in Inches (mm)			Weight Lbs. (kg)
			H	W	D	
4	208	1 – 3	18.32	5.05	12.45	21.0 (10.0)
	230	1 – 3	(465)	(128)	(316)	
	480	1 – 7-1/2				
5	208	5 – 7-1/2	23.68	5.40	15.34	35.0 (16.0)
	230	5 – 10	(601)	(137)	(390)	
	480	10 – 20				
6	208	10 – 20	29.4	7.5	15.3	67.0 (30.0)
	230	15, 20	(746)	(191)	(387)	
	480	25 – 40				
7	208	25, 30	37.5	9.1	16.0	108 (49)
	230	25, 30	(953)	(231)	(419)	
	480	50 – 75				

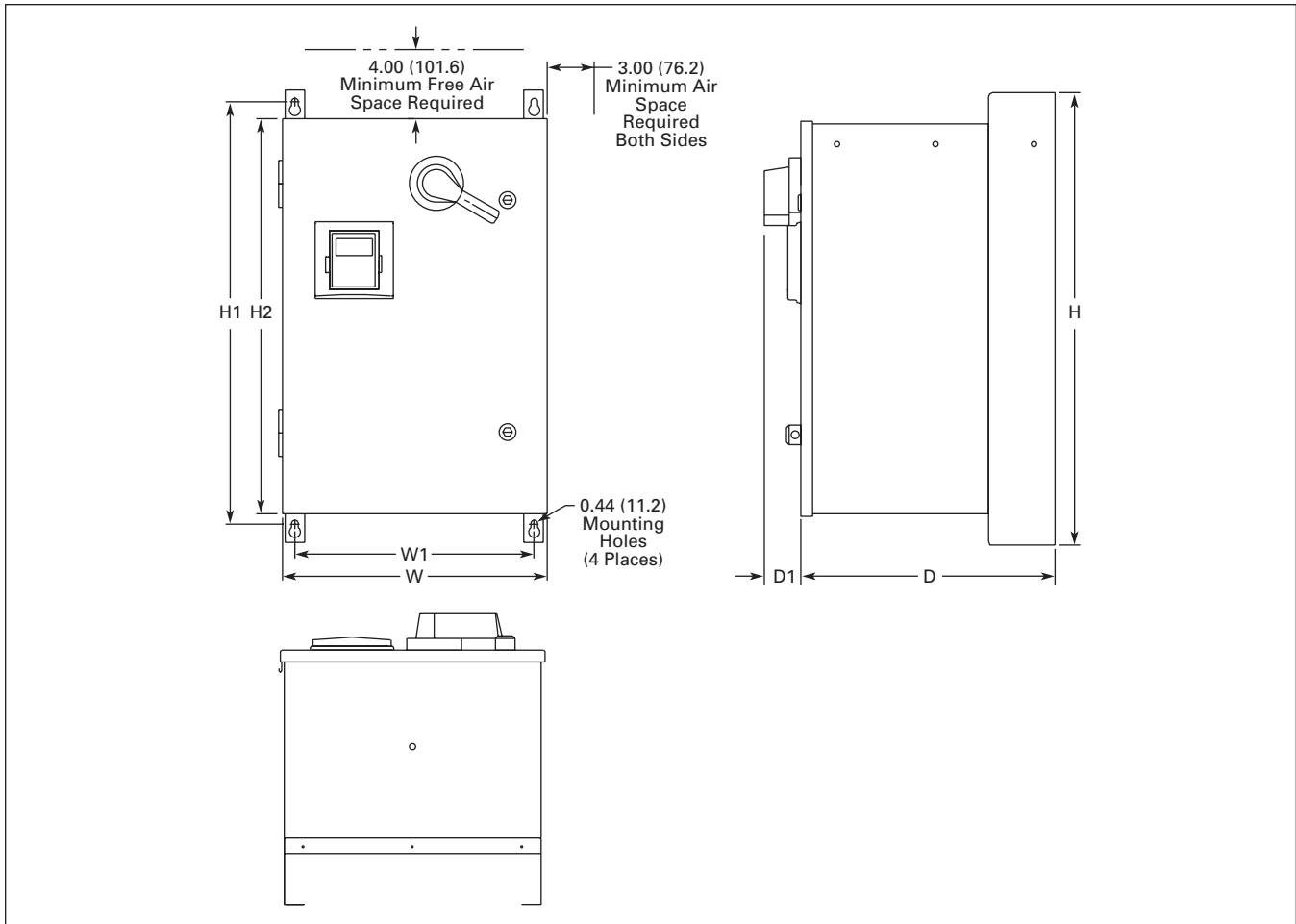


Figure 3. NEMA Type 12 IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box A

Table 10. NEMA Type 12 IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box A

Frame Size	Voltage AC	hp (VT)	Approximate Dimensions in Inches (mm)							Weight Lbs. (kg)
			H	H1	H2	W	W1	D	D1	
4	208	1 – 3	29.00	27.00	25.35	16.92	15.30	16.26	2.34	200 (91)
	230	1 – 3	(736.6)	(685.8)	(643.9)	(429.8)	(388.6)	(413.0)	(59.4)	
	480	1 – 7-1/2								
5	208	5, 7-1/2	29.00	27.00	25.35	16.92	15.30	16.26	2.34	200 (91)
	230	5 – 10	(736.6)	(685.8)	(643.9)	(429.8)	(388.6)	(413.0)	(59.4)	
	480	10 – 20								
6	208	10, 15	29.00	27.00	25.35	16.92	15.30	16.26	2.34	200 (91)
	230	15	(736.6)	(685.8)	(643.9)	(429.8)	(388.6)	(413.0)	(59.4)	
	480	25, 30								

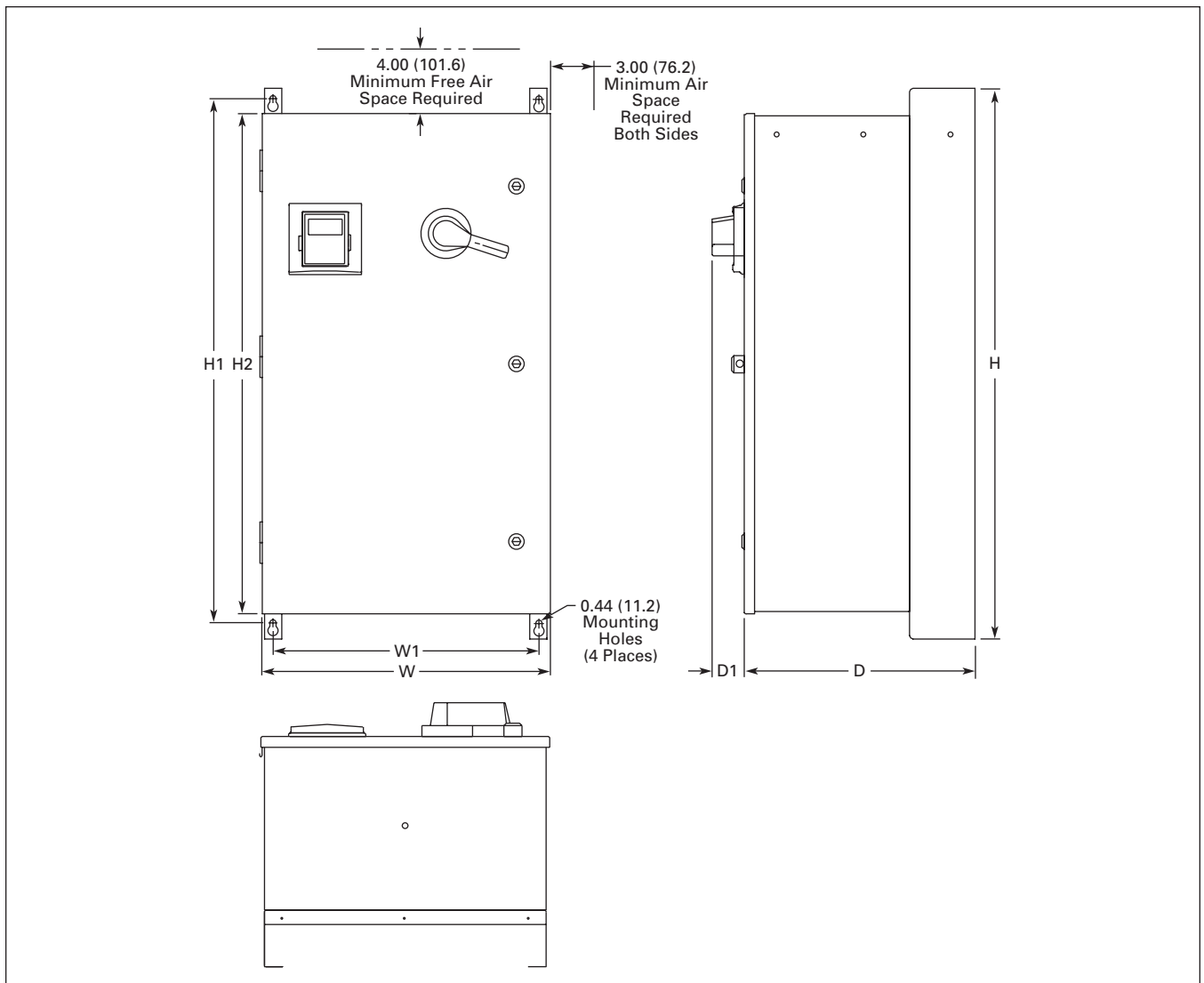


Figure 4. NEMA Type 12 IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box B

Table 11. NEMA Type 12 IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box B

Frame Size	Voltage AC	hp (VT)	Approximate Dimensions in Inches (mm)							Weight Lbs. (kg)
			H	H1	H2	W	W1	D	D1	
6	208	20	40.00	38.00	36.35	20.92	19.30	16.76	2.34	200 (91)
	230	20	(1016.0)	(965.2)	(923.3)	(531.4)	(490.2)	(425.7)	(59.4)	
	480	40								
7	208	25, 30	40.00	38.00	36.35	20.92	19.30	16.76	2.34	200 (91)
	230	25, 30	(1016.0)	(965.2)	(923.3)	(531.4)	(490.2)	(425.7)	(59.4)	
	480	50 – 75								

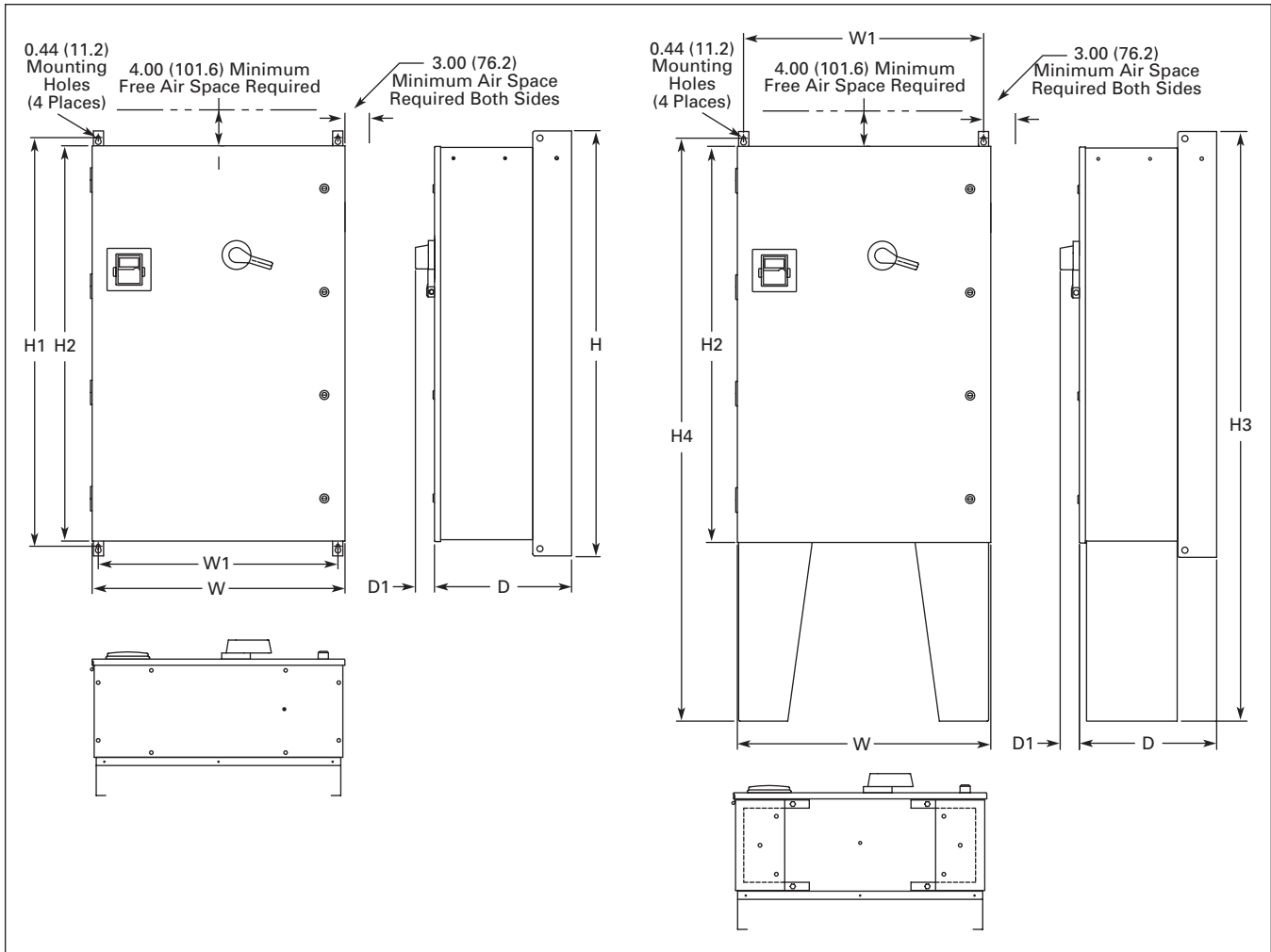


Figure 5. NEMA Type 12 IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box C

Table 12. NEMA Type 12 IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box C

Frame Size	Voltage AC	hp (VT)	Approximate Dimensions in Inches (mm)									Weight Lbs. (kg)
			H	H1	H2	H3	H4	W	W1	D	D1	
7	208	40	52.00	50.00	48.35	72.00	71.19	30.92	29.30	16.78	2.34	TBD
	230	40	(1320.8)	(1270.0)	(1228.1)	(1828.8)	(1808.2)	(785.4)	(744.2)	(426.2)	(59.4)	
8	208	50 – 60	52.00	50.00	48.35	72.00	71.19	30.92	29.30	16.78	2.34	TBD
	230	50 – 75	(1320.8)	(1270.0)	(1228.1)	(1828.8)	(1808.2)	(785.4)	(744.2)	(426.2)	(59.4)	
	480	100 – 150										

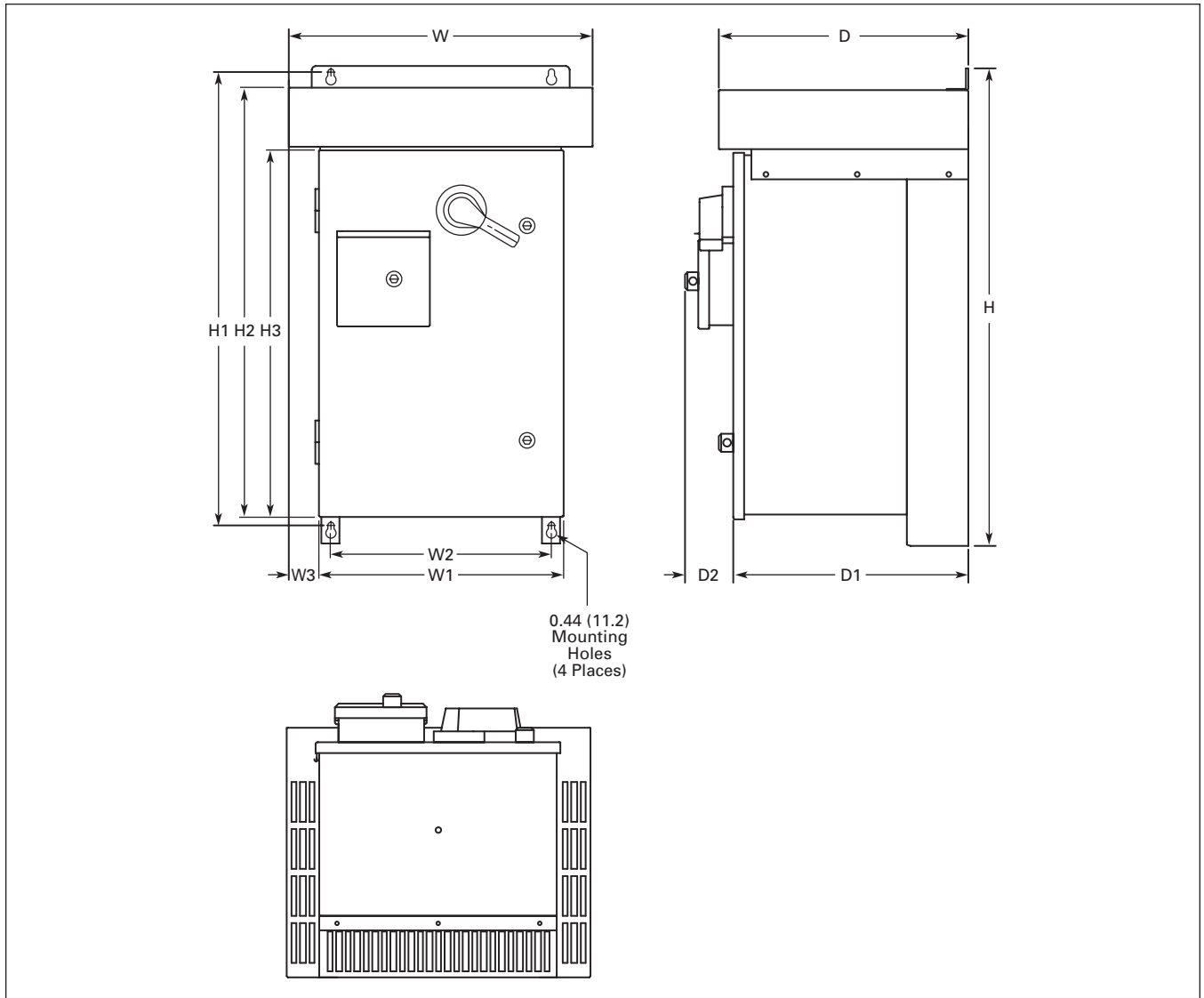


Figure 6. NEMA Type 3R IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box A

Table 13. NEMA Type 3R IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box A

Frame Size	Voltage AC	hp (VT)	Approximate Dimensions in Inches (mm)										Weight Lbs. (kg)	
			H	H1	H2	H3	W	W1	W2	W3	D	D1		D2
4	208	1 – 3	33.00	31.36	29.67	25.35	21.05	16.92	15.30	2.07	17.24	16.26	3.31	200 (91)
	230	1 – 3	(838.2)	(796.5)	(753.6)	(643.9)	(534.7)	(429.8)	(388.6)	(52.6)	(437.9)	(413.0)	(84.1)	
	480	1 – 7-1/2												
5	208	5, 7-1/2	33.00	31.36	29.67	25.35	21.05	16.92	15.30	2.07	17.24	16.26	3.31	200 (91)
	230	5 – 10	(838.2)	(796.5)	(753.6)	(643.9)	(534.7)	(429.8)	(388.6)	(52.6)	(437.9)	(413.0)	(84.1)	
	480	10 – 20												
6	208	10, 15	33.00	31.36	29.67	25.35	21.05	16.92	15.30	2.07	17.24	16.26	3.31	200 (91)
	230	15	(838.2)	(796.5)	(753.6)	(643.9)	(534.7)	(429.8)	(388.6)	(52.6)	(437.9)	(413.0)	(84.1)	
	480	25, 30												

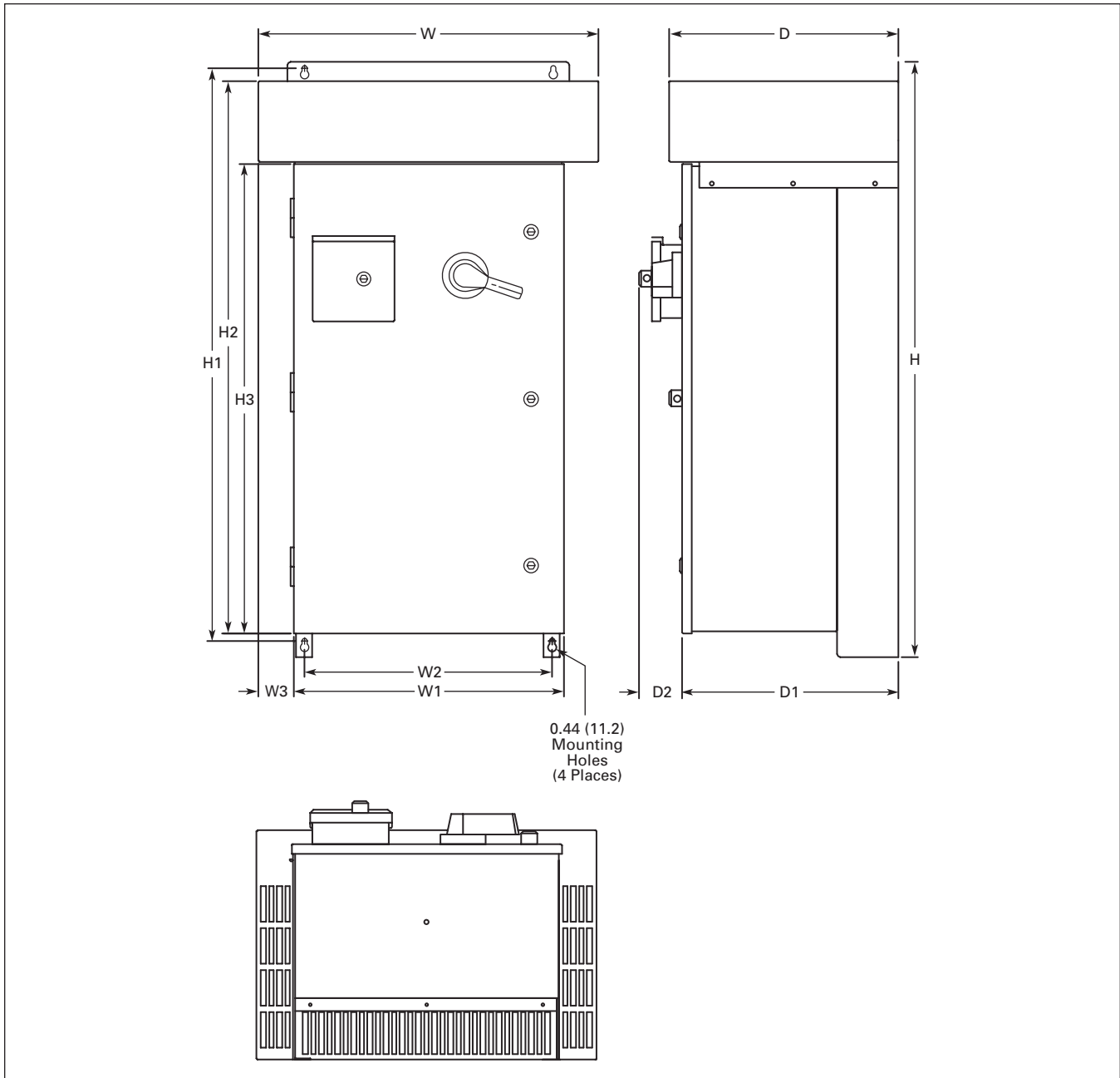


Figure 7. NEMA Type 3R IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box B

Table 14. NEMA Type 3R IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box B

Frame Size	Voltage AC	hp (VT)	Approximate Dimensions in Inches (mm)										Weight Lbs. (kg)	
			H	H1	H2	H3	W	W1	W2	W3	D	D1		D2
6	208	20	46.09	44.45	42.77	36.35	26.31	20.92	19.30	2.69	17.74	16.76	3.31	200
	230	20	(1170.7)	(1129.0)	(1086.4)	(923.3)	(668.3)	(531.4)	(490.2)	(68.3)	(450.6)	(425.7)	(84.1)	(91)
	480	40												
7	208	25, 30	46.09	44.45	42.77	36.35	26.31	20.92	19.30	2.69	17.74	16.76	3.31	200
	230	25, 30	(1170.7)	(1129.0)	(1086.4)	(923.3)	(668.3)	(531.4)	(490.2)	(68.3)	(450.6)	(425.7)	(84.1)	(91)
	480	50 - 75												

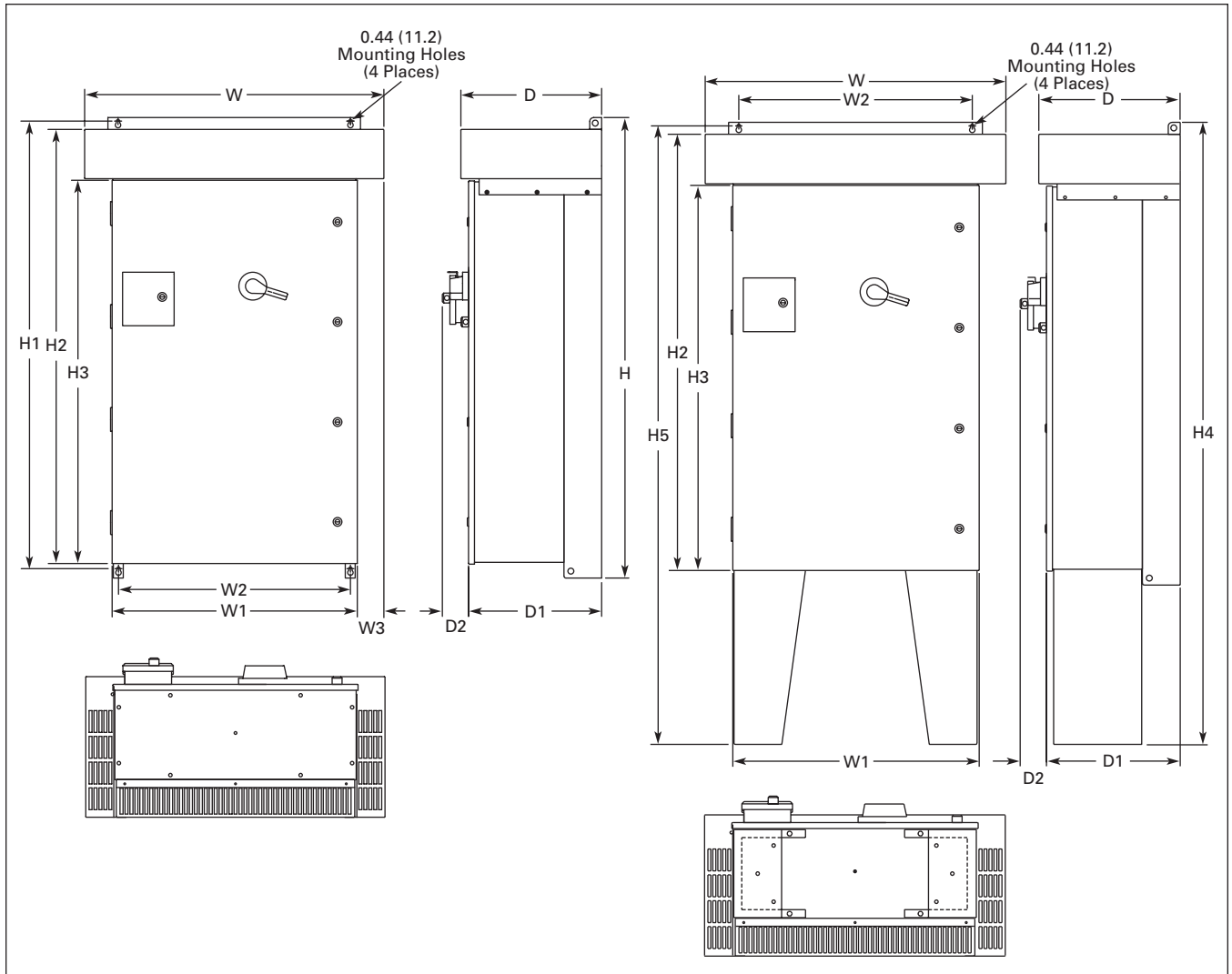


Figure 8. NEMA Type 3R IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box C

Table 15. NEMA Type 3R IntelliPass/IntelliDisconnect Drive Dimensions — Enclosure Box C

Frame Size	Voltage AC	hp (VT)	Approximate Dimensions in Inches (mm)													Weight Lbs. (kg)
			H	H1	H2	H3	H4	H5	W	W1	W2	W3	D	D1	D2	
7	208	40	58.09	56.45	54.77	48.35	78.09	77.64	37.73	30.92	29.30	3.34	17.74	16.77	3.31	TBD
	230	40	(1475.5)	(1433.8)	(1391.2)	(1228.1)	(1983.5)	(1972.1)	(958.3)	(785.4)	(744.2)	(84.8)	(450.6)	(426.0)	(84.1)	
8	208	50 – 60	58.09	56.45	54.77	48.35	78.09	77.64	37.73	30.92	29.30	3.34	17.74	16.77	3.31	TBD
	230	50 – 75	(1475.5)	(1433.8)	(1391.2)	(1228.1)	(1983.5)	(1972.1)	(958.3)	(785.4)	(744.2)	(84.8)	(450.6)	(426.0)	(84.1)	
	480	100 – 150														

Wiring Diagrams

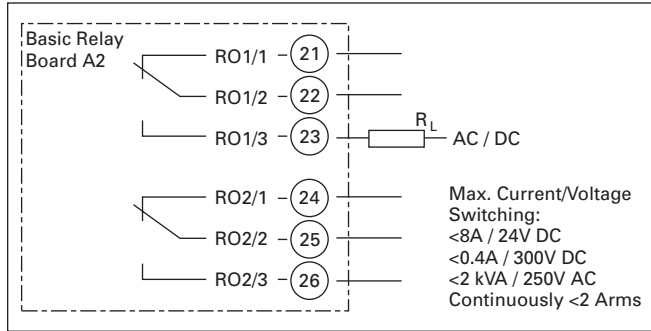


Figure 9. A2 Board Control Wiring

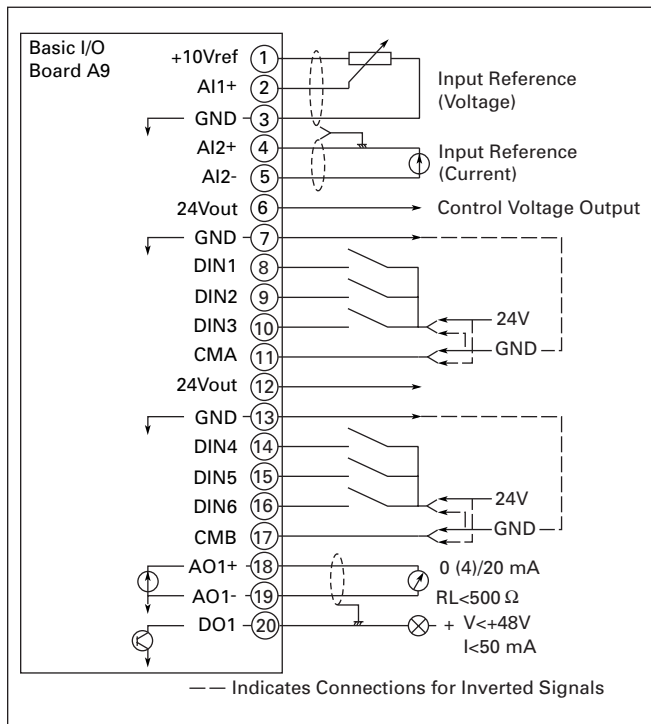


Figure 10. A9 Board Control Wiring

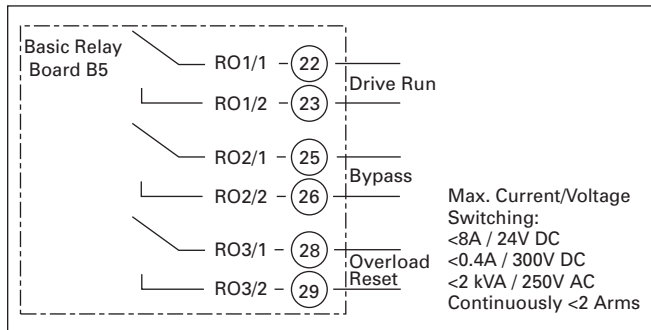


Figure 11. B5 Board Control Wiring

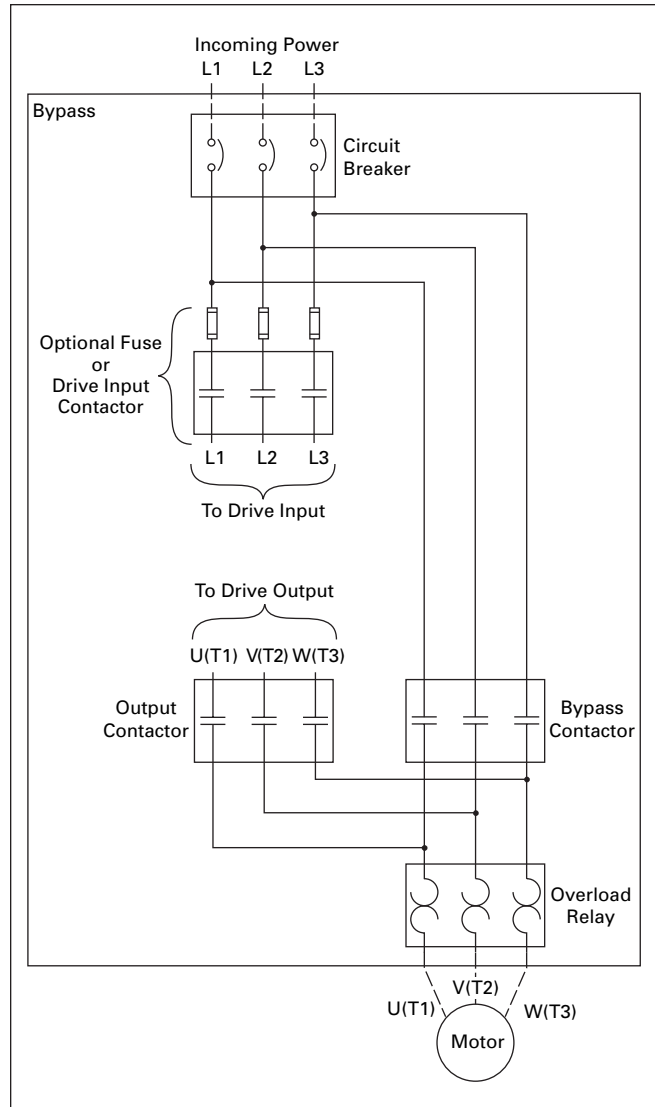


Figure 12. HVX9000 IntelliPass Power Wiring

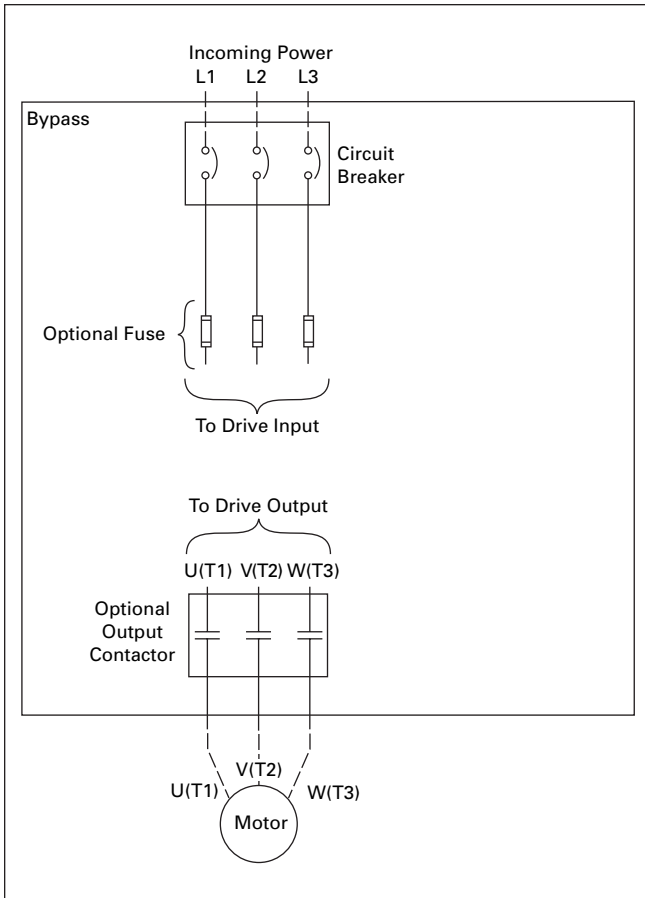


Figure 13. HVX9000 IntelliDisconnect Power Wiring

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